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Suite 110		ART UNIT		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/816,364

Applicant(s)

JUNG ET AL.

Examiner

Oleg Survillo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-180 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-180 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date See Continuation Sheet.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application
- ☐ Other: ____.

DETAILED ACTION

Specification

1. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because it does not enable the United States Patent and Trademark Office and the public generally to determine quickly from a cursory inspection the nature and gist of the technical disclosure. Correction is required. See MPEP § 608.01(b).

Claim Objections

4. Claims 8 and 56 are objected to because of the following informalities: the body of the claims appears to be missing "more" in "...from one or more to be included in the listing". Appropriate correction is required.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 108-128 and 154-178 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As to claim 108, index creation agent and federated index creation agent appear to be a computer program (specification, page 8 last paragraph; page 27 second paragraph) (for the interpretation of means plus function language please refer to ***Claim Rejections - 35 USC § 112*** section of the Office Action). A system comprising a computer program per se is not in one of the statutory categories.

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As to claims 109-128, additional means for performing a function do not appear to introduce any tangible elements that would render a system of claim 108 statutory under 35 U.S.C. 101.

As to claim 154, federated index creation agent appears to be a computer program (specification, page 8 last paragraph; page 27 second paragraph) (for the interpretation of means plus function language please refer to ***Claim Rejections - 35 USC § 112*** section of the Office Action). A system comprising a computer program per se is not in one of the statutory categories.

As to claims 155-178, additional means for performing a function do not appear to introduce any tangible elements that would render a system of claim 108 statutory under 35 U.S.C. 101.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 154-178 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.

Claims 154-178 incorporate means-plus-function limitations reciting a function to be performed rather than definite structure or materials for performing that function.

As to claim 154, limitations: "means for obtaining" and "means for creating" are interpreted to invoke 35 USC 112, sixth paragraph.

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The current specification shows that obtaining at least a part of a first-administered (second-administered) content index from a first (second) set of notes and creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index is performed by a federated index creation agent (914) (specification, page 27, second paragraph).

Therefore, means for obtaining and means for creating are interpreted to be a federated index creation agent (914).

Claim 154 appears to be a single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, and is, therefore, subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983)

MPEP 2164.08(a)

Claims 155-178 are rejected under 35 U.S.C. 112, first paragraph as being dependent from the claim 154.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 19, 36, 37, 45-47, 67, 84, 85 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 36, 37, 84, and 85 have similar limitations as claims 12, 13, 32, and 33 of the co-pending application 10/816,375 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 2, 2007.

Claims 19 and 67 have similar limitations as claim 16 of the co-pending application 10/816,358 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 14, 2007.

As to claims 45 and 93, it is ambiguous because it is unclear which of the established standards or protocols are being selected. The specification does not provide any example or hint of what these established standards or protocols could be which makes the claim indefinite.

As to claims 46 and 94, it is ambiguous because it is unclear what is being claimed. It is not understood what identifier of which protocol or standard is being published and where it is being published. The specification is moot with respect to clarifying the meaning of the claim and/or relating the claimed limitations to the invention sought to be patented.

As to claims 47 and 95, it is ambiguous because it is unclear what is being encrypted. It appears that one or more of the established standards or protocols is being encrypted, which does not make any sense. The specification is moot with respect to clarifying the meaning of the claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 179 and 180 are rejected under 35 U.S.C. 102(b) as being anticipated by Mulgund et al. (2002/0161751).

As to claim 179, Mulgund shows:

at least computational system [database server (10)] operably coupled with at least one of a first-administered set of motes (Fig. 1); and

at least one federated index creation agent resident in the computational system [network modeling agent (14)] (Fig. 1), said at least one federated index creation agent configured to create at least a part of a federated index [instantaneous state of the sensing network] (par. [0020] l. 17-20).

As to claim 180, Mulgund shows:

at least computational system [database server (10)] operably coupled with at least one of a first-administered set of motes (Fig. 1); and

at least one federated index resident in the computational system (Figs. 3 and 4), said at least one federated index configured to contain at least a part of at least one of a mote-addressed content index (par. [0021] – [0024]).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1, 98-101, 104, 105, 108, 119-122, 125, 126, 129, 144-147, 150, 151, 154, 169-172, 175, and 176 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. (2002/0161751) in view of Bennett et al. (U.S. Patent No.: 5,615,367).

As to claim 1, Mulgund shows:

creating one or more content indexes for a set of notes [building a database model by updating relational database logical design tables at each step of the discovering step (paragraph 0007)] (similarly to claim 1 of the co-pending application 10/816,375 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 2, 2007);

obtaining at least a part of the one or more content indexes of the set of notes [visiting a node and retrieving the information stored at the node] (paragraph 0062)) wherein information is retrieved from a knowledge base (18) at a node (paragraph [0026 lines 11-17) and used to form a relational database (Fig. 3 and Fig. 4).

It is being noted that, based on the current specification, the step of creating and obtaining is performed in essentially the same fashion for both first-administered and second-administered content indexes as well as for the first and second set of notes.

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As a result, a pure repetition of creating and obtaining steps for first and second sets of notes is redundant, as it does not further limit the claim. Mulgund shows a first and second-administered content indexes for corresponding first and second sets of notes (Figs. 1, 3, and 4).

Mulgund shows creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes (abstract, paragraph [0005] and [0025], Fig. 3, Fig. 4).

Alternatively, Bennett shows creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes [creating a design document from a first and second tables] (summary of the invention, Fig. 5A).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Mulgund by creating a federated index explicitly from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes in order to aggregate information from first and second indexes [tables] into a relational database (abstract, in Bennett).

As to claims 98 and 100, Mulgund shows creating the federated index from at least a part of one or more multi-note content indexes of the first (second) set of notes (Fig. 4, par. [0042]).

As to claims 99 and 101, Mulgund shows creating the federated index from at least a part of at least one of a note-addressed sensing index, a note-addressed

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control index, or a mote-addressed routing/spatial index of the first (second) set of motes [visiting a node and retrieving the information stored at the node] (paragraphs [0007], [0026] lines 11-17, and [0062]).

As to claims 104 and 150, Mulgund shows generating the federated index to have information pertaining to a currency of at least one entry of an administered content index [timestamp status] (Figs. 3 and 4).

As to claims 105 and 151, Mulgund shows generating the federated index to have information pertaining to an expiration of at least one entry of an administered content index [timestamp status] (Figs. 3 and 4, par. [0041]).

As to claims 108 and 129, Mulgund shows all the elements, similar to claim 1, as discussed above.

As to claims 119 and 120, 121 and 122, Mulgund shows all the elements, similar to claims 98 and 99, as discussed above.

As to claims 125 and 126, Mulgund shows all the elements, similar to claims 104 and 105, as discussed above.

As to claims 144 and 146, Mulgund shows all the elements, similar to claim 98, as discussed above.

As to claims 145 and 147, Mulgund shows all the elements, similar to claim 99, as discussed above.

As to claim 154, Mulgund shows all the elements, similar to claim 129, as discussed above.

As to claims 169-172, Mulgund shows all the elements, similar to claims 144-147, as discussed above.

As to claim 175, Mulgund shows all the elements, similar to claim 150, as discussed above.

As to claim 176, Mulgund shows all the elements, similar to claim 151, as discussed above.

14. Claims 2-97, 109-118, 130-143, and 155-168 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. in view of Bennett et al. and in further view of other references used to reject corresponding claims of the co-pending applications (the listing of additional references is not provided here for clarity, but is provided in the Notice of References Cited).

As to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16 of the co-pending application 10/816,358 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 14, 2007.

As to claims 20-22 and 23-24, 68-70 and 71-72, these claims have similar limitations as claims 1-3 and 11-12 of the co-pending application 10/816,102 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 21, 2007.

As to claims 25-44 and 73-92, these claims have similar limitations as claims 1-20 of the co-pending application 10/816,375 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 2, 2007.

Claims 45-47 and 93-95 will be examined as best understood.

As to claims 45, 46, 93, and 94, Mulgund shows selecting from one or more established standards or protocols and publishing at least a part of an identifier of the selected established standard or protocol [selecting and identifying selected protocol such as the Internet] (abstract).

As to claims 47 and 95, these claims has similar limitations as claim 11 of the co-pending application 10/816,102 and therefore is rejected for the same reasons as provided in the Office Action mailed on August 21, 2007.

As to claims 48, 49, 96, and 97, these claims have similar limitations as claims 26 and 27 of the co-pending application 10/816,102 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 21, 2007.

As to claims 109 and 110, 114 and 115, these claims have similar limitations as claims 2 and 3, discussed above.

As to claims 111 and 116, these claims have similar limitations as claim 25, discussed above.

As to claims 112 and 113, 117 and 118, these claims have similar limitations as claims 9 and 10, discussed above.

As to claims 130 and 137, these claims have similar limitations as claim 3, discussed above.

As to claims 131-134 and 138-141, these claims have similar limitations as claims 12-15, discussed above.

As to claims 135-136 and 142-143, these claims have similar limitations as claims 9-10, discussed above.

As to claims 155-168, these claims have similar limitations as claims 130-143, discussed above.

15. Claims 102, 103, 106, 123, 124, 127, 148, 149, 152, 173, 174, and 177 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. in view of Bennett et al. and in further view of Nelson (2004/0122849).

As to claim 102, Mulgund in view of Bennett shows all the elements except for generating the federated index to have one or more entries noting one or more respective administrative domains of one or more content index entries.

Nelson shows generating the federated index [database table] to have one or more entries noting one or more respective administrative domains of one or more content index entries (abstract, Figs. 3A-3C, par. [0017]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Mulgund in view of Bennett by generating the federated index to have one or more entries noting one or more respective administrative domains of one or more content index entries in order to limit a user access to documents in the database only to the user's own domain (abstract in Nelson).

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As to claim 103, Mulgund in view of Bennett shows all the elements except for generating the federated index to have access information to one or more content indexes for an administered content index.

Nelson shows generating the federated index [database table] to have access information [domain ID] to one or more content indexes for an administered content index (abstract, Figs. 3A-3C and 7, par. [0017]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Mulgund in view of Bennett by generating the federated index to have access information to one or more content indexes for an administered content index in order to limit a user access to documents in the database only to the user's own domain (abstract in Nelson).

As to claim 106, Mulgund in view of Bennett shows all the elements except for generating the federated index to have metadata pertaining to an administrative domain, wherein the metadata includes an ownership indicator.

Nelson shows generating the federated index [database table] to have metadata pertaining to an administrative domain, wherein the metadata includes an ownership indicator (par. [0040], Fig. 3C).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Mulgund in view of Bennett by generating the federated index to have metadata pertaining to an administrative domain, wherein the metadata includes an ownership indicator in order to limit a user access to documents in the database only to the user's own domain (abstract in Nelson).

As to claims 123 and 124, these claims have similar limitations as claims 102 and 103, discussed above.

As to claim 127, this claim has similar limitations as claim 106, discussed above.

As to claim 148, this claims has similar limitations as claim 102, discussed above

As to claim 149, this claims has similar limitations as claim 103, discussed above

As to claim 152, this claims has similar limitations as claim 106, discussed above

As to claim 173, this claims has similar limitations as claim 148, discussed above

As to claim 174, this claims has similar limitations as claim 149, discussed above

As to claim 177, this claims has similar limitations as claim 152, discussed above

16. Claims 107, 128, 153, and 178 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. in view of Bennett and in further view of "TAG: a Tiny Aggregation Service for Ad-Hoc Sensor Networks" by Samuel Madden et al.

As to claim 107, Mulgund in view of Bennett shows all the elements except for having an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain.

Madden shows having an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain (abstract, section 1.1 the TAG Approach).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Mulgund in view of Bennett by having an administrative domain-specific query string generated for or supplied by an

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administrative domain to produce an updated content index for that domain in order to produce updated content index (Mulgund, par. [0041]).

As to claim 128, this claim has similar limitations as claim 107, discussed above.

As to claim 153, this claim has similar limitations as claim 107, discussed above.

As to claim 178, this claim has similar limitations as claim 153, discussed above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Oleg Survillo whose telephone number is 571-272-9691. The examiner can normally be reached on M-Th 7:30am - 5:00pm; F 7:30am - 4:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner: Oleg Survillo

Phone: 571-272-9691

A handwritten signature in black ink, appearing to read "Andrew Caldwell". The signature is fluid and cursive, with a large initial "A" and "C".

ANDREW CALDWELL
SUPERVISORY PATENT EXAMINER

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date : 3/31/04, 4/22/04, 4/18/05, 7/24/06, 1/16/07, 3/9/07, 4/2/07, 4/16/07, 5/7/07, 6/8/07, 6/22/07, 7/9/07, 7/19/07.